IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A ZrO_2-Al_2O_3 composite ceramic material produced by a process comprising mixing a first powder for providing ZrO_2 grains with a second powder for providing Al_2O_3 grains, which is obtained by mixing an α-Al_2O_3 powder having an average particle size of 0.3 μm or less with a γ-Al_2O_3 powder having a specific surface within a range of 10 to 100 m^2/g and a substantially spherical shape prepared such that a mixture ratio by volume of the γ-Al_2O_3 powder to the α-Al_2O_3 powder is in a range of 50:50 to 90:10, molding a resultant mixture in a desired shape to obtain a green compact, and sintering said green compact at a sintering temperature in an oxygen-containing atmosphere, wherein the composite ceramic material comprises ~~comprising~~:

a first phase of said ZrO_2 grains containing 10 to 12 mol% of CeO_2 as a stabilizer and having an average grain size of 0.1 μm to 1 μm, said ZrO_2 grains composed of 90 vol% or more of tetragonal ZrO_2;

a second phase of said Al_2O_3 grains having an average grain size of 0.1 to 0.5 μm, a content of said second phase in the composite ceramic material being within a range of 20 to 60 vol%;

wherein said Al_2O_3 grains are dispersed within said ZrO_2 grains at a first dispersion ratio of ~~2%~~ 4% or more, which is defined as a ratio of the number of said Al_2O_3 grains dispersed within said ZrO_2 grains relative to the number of the entire Al_2O_3 grains dispersed in the composite ceramic material, and

said ZrO_2 grains are dispersed within said Al_2O_3 grains at a second dispersion ratio of 1% or more, which is defined as a ratio of the number of said ZrO_2 grains dispersed within said Al_2O_3 grains relative to the number of the entire ZrO_2 grains dispersed in the composite ceramic material.

Claim 2 (Original): The composite ceramic material as set forth in claim 1, wherein said ZrO_2 grains contains 0.02 to 1 mol% of TiO_2.

Claim 3 (Canceled).

Claim 4 (Currently Amended): A method of producing a ZrO_2-Al_2O_3 composite ceramic material, said composite ceramic material comprising:

a first phase of ZrO_2 grains containing 10 to 12 mol% of CeO_2 as a stabilizer and having an average grain size of 0.1 μm to 1 μm, said ZrO_2 grains composed of 90 vol% or more of tetragonal ZrO_2;

a second phase of Al_2O_3 grains having an average grain size of 0.1 to 0.5 μm;

wherein said Al_2O_3 grains are dispersed within said ZrO_2 grains at a first dispersion ratio of ~~2%~~ 4% or more, which is defined as a ratio of the number of said Al_2O_3 grains dispersed within said ZrO_2 grains relative to the number of the entire Al_2O_3 grains dispersed in the composite ceramic material, and

said ZrO_2 grains are dispersed within said Al_2O_3 grains at a second dispersion ratio of 1% or more, which is defined as a ratio of the number of said ZrO_2 grains dispersed within said Al_2O_3 grains relative to the number of the entire ZrO_2 grains dispersed in the composite ceramic material,

wherein the method ~~comprises the steps of:~~ comprises:

~~preparing a first powder for providing said first phase and a second powder for providing said second phase;~~

~~mixing said first powder with said second powder such that a content of said second phase in said composite ceramic material is within a range of 20 to 60 vol%;~~

~~molding a resultant mixture in a desired shape to obtain a green compact; and~~

~~sintering said green compact at a sintering temperature in an oxygen-containing atmosphere~~

mixing an α-Al_2O_3 powder having an average particle size of 0.3 μm or less with a γ-Al_2O_3 powder having a specific surface within a range of 10 to 100 m^2/g and a substantially spherical shape prepared such that a mixture ratio by volume of the γ-Al_2O_3 powder to the α-Al_2O_3 powder is in a range of 50:50 to 90:10, thereby obtaining a second powder for providing said Al_2O_3 grains;

mixing a first powder for providing said ZrO_2 grains with the second powder;

molding a resultant mixture in a desired shape to obtain a green compact, and sintering said green compact at a sintering temperature in an oxygen-containing atmosphere.

Claims 5-6 (Canceled).

Claim 7 (Original): The method as set forth in claim 4, wherein said resultant mixture is calcined at a temperature of 800°C or more and less than said sintering temperature, and then pulverized to obtain a calcined powder, and wherein said green compact of the calcined powder is sintered in the oxygen-containing atmosphere.

Claim 8 (Canceled).

Claim 9 (New): The composite ceramic material as set forth in claim 1, wherein the mixture ratio by volume of the γ-Al_2O_3 powder to the α-Al_2O_3 powder is in a range of 60:40 to 80:20.

Claim 10 (New): The composite ceramic material as set forth in claim 1, wherein the mixture ratio by volume of the γ-Al_2O_3 powder to the α-Al_2O_3 powder is 70:30.

Claim 11 (New): The composite ceramic material as set forth in claim 1, wherein the γ-Al_2O_3 powder is prepared by a laser abrasion method.

DISCUSSION OF THE AMENDMENT

Claim 1 has been amended into a product-by-process claim, the process supported by Claim 4, combined with the disclosure of a mixture ratio of γ-Al_2O_3 powder to α-Al_2O_3 powder, at Table 5, page 28 of the specification, particularly Examples 22-26 or at Table 7, page 29 of the specification, particularly Examples 28-32; and by changing the first dispersion minimum to 4%, as supported by Claim 3. Claim 3 has been canceled. Claim 4 has been amended by changing the first dispersion minimum to 4%, as supported by Claim 3; by deleting the preparation step and the volume percentage of the second phase in the composite ceramic material limitation; by incorporating the subject matter of Claim 6 therein; and by adding the above-discussed mixture ratio. Claims 5, 6 and 8 have been canceled.

New Claims 9-11 have been added. Claims 9 and 10 are supported by above-discussed Examples 23-25 or Examples 29-31. Claim 11 is supported by page 23, lines 27-28 of the specification.

No new matter is believed to have been added by the above amendment. Claims 1, 2, 4, 7, and 9-11 are now pending in the application.